**Prime** num=int(input("enter a number")) count=0 for i in range(1,num+1): if num%i==0: count+=1 if count==2:

print(num,"is prime") else: print(num,"is not prime")

**output**

==== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/prime.py === enter a number9

9 is not prime

==== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/prime.py === enter a number23

23 is prime

**Fibonacci** n=int(input("enter a number")) a=0 b=1 if n<0:

print("incorrect input")

elif n == 0: print(a) elif n == 1: print(a) else: for i in range(2,n):

c=a+b a=b b=c print(b) **output**

===== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/fib.py ==== enter a number10

1

2

3

5 8

13

21

34

**Factorial** num=int(input("enter a number")) fact=1

if num == 0:

print("factorial of",num,"is",fact) for i in range(1,num+1):

fact=fact\*i

print("factorial of",num,"is",fact)

# output

==== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/fact.py ==== enter a number5

factorial of 5 is 120

# Armstrong

num=int(input("enter a number")) sum=0 temp=num while temp>0: digit=temp%10 sum+=digit\*\*3 temp//=10 if num==sum:

print(num,"is armstrong") else:

print(num,"is not armstrong")

# output

== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/armstrong.py = enter a number663

663 is not armstrong

== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/armstrong.py = enter a number407

407 is armstrong

# N prime numbers

n=int(input("enter a limit")) print("prime upto",n,"are") for i in range(2,n + 1): if i > 1: for j in range(2,i):

if(i%j==0): break else:

print(i)

# output

=== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/prime n.py == enter a limit6 prime upto 6 are

2

3

5

**Perfect** n=int(input("enter a number")) sum=0 for i in range(1,n): if n%i==0:

sum=sum+i if(sum==n):

print("perfect number") else:

print("not perfect number")

# output

=== RESTART:

C:/Users/acer/AppData/Local/Programs/Python/Python310/perfect.py == enter a number27 not perfect number